

Amendments to the Claims

Please amend the claims per the following “Claims listing”, which cancels all previous versions of the claims:

Claims 1-25 (cancelled).

Claim 26 (currently amended). Apparatus for providing optical radiation, comprising an optical fibre having a core, a first cladding and a second cladding, and wherein:

the core is located within the first cladding;

the first cladding is located within the second cladding;

in cross section, the first cladding is non-circular;

in cross section, the first cladding is defined by an equilateral star and an outer

periphery which is polygonal in shape, the polygonal shape being defined by a plurality of intersecting sides, each side comprising a circular arc, all said circular arcs being concave with respect to the core to thereby form a plurality of concave sides; and

the circular arcs have centers at vertices of the equilateral star, such that the first

cladding has a substantially constant diameter in its cross-section.

Claim 28 (previously presented). Apparatus according to claim 26 wherein the first cladding has at least one axis of mirror symmetry.

Claim 29 (previously presented). Apparatus according to claim 26 wherein the first cladding has a geometric centre.

1 Claim 30 (previously presented). Apparatus according to claim 29 in which the core is
2 located at the geometric centre.

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4 Claim 31 (previously presented). Apparatus according to claim 29 in which the core is
5 offset from the geometric centre.

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7 Claim 32 (previously presented). Apparatus according to claim 26 wherein the core is
8 centred at the centre of a smallest imaginary circle that can contain the first cladding.

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10 Claim 33 (previously presented). Apparatus according to claim 26 wherein the core is
11 offset from the centre of a largest imaginary circle that can be contained within the first
12 cladding.

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14 Claim 34 (cancelled).

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16 Claim 35 (currently amended). Apparatus according to claim 26 [[34]] wherein the
17 circular arcs each have a first radius equal to a length of a side of the equilateral star.

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19 Claim 36 (currently amended). Apparatus according to claim 26 [[34]] wherein the
20 circular arcs each have a first radius greater than a length of a side of the equilateral
21 star, the circular arcs are joined by second circular arcs having a centre located at the
22 vertices, and the second circular arcs each have a second radius equal to the difference
23 between the first radius and the length of the side of the star.

1 Claim 37 (currently amended). Apparatus according to claim 26 [[34]] wherein the
2 equilateral star is defined by lines, and each line of the star crosses all the other lines of
3 the star.

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5 Claim 38 (previously presented). Apparatus according to claim 37 wherein the
6 equilateral star is an equiangular star.

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8 Claim 39 (previously presented). Apparatus according to claim 37 wherein the
9 equilateral star contains at least two different angles.

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11 Claim 40 (previously presented). Apparatus according to claim 34 wherein the
12 equilateral star contains an odd number of vertices.

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14 Claim 41 (previously presented). Apparatus according to claim 26 wherein the fibre
15 contains at least one longitudinally extended hole.

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17 Claim 42 (previously presented). Apparatus according to claim 41 wherein the hole is
18 circular.

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20 Claim 43 (previously presented). Apparatus according to claim 41 wherein the hole is
21 non-circular.

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23 Claim 44 (previously presented). Apparatus according to claim 26 wherein the fibre
24 contains at least one region of low refractive index.

1 Claim 45 (previously presented). Apparatus according to claim 44 wherein the region of
2 low refractive index is circular.

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4 Claim 46 (previously presented). Apparatus according to claim 44 wherein the region of
5 low refractive index is non-circular.

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7 Claim 47 (previously presented). Apparatus according to claim 26 wherein the fibre
8 comprises rare-earth dopant.

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10 Claim 48 (cancelled).

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12 Claim 49 (currently amended). Apparatus according to claim 47 wherein the rare
13 earth doping is selected from the group consisting of Ytterbium, Erbium, Neodymium,
14 Praseodymium, Thulium, Samarium, Holmium and Dysprosium, Erbium codoped with
15 Ytterbium, and [[or]] Neodymium codoped with Ytterbium.

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17 Claim 50 (previously presented). Apparatus according to claim 26 and further
18 comprising a pump source configured to provide pump radiation coupled to the first
19 cladding.

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21 Claim 51 (previously presented). Apparatus according to claim 26 wherein the
22 apparatus is in the form of a laser, an amplifier, a source of amplified spontaneous
23 emission, or a master oscillator power amplifier.

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25

1 Claim 52 (new). Apparatus according to claim 26 wherein the star comprises between
2 three and nine inclusive vertices.

4 Claim 53 (new). Apparatus for providing optical radiation, comprising an optical fibre
5 having core, a first cladding and a second cladding, and wherein:

the core is located within the first cladding;

the first cladding is located within the second cladding;

in cross section, the first cladding is substantially non-circular;

9 in cross section, the first cladding is defined by an outer periphery being defined
10 by a plurality of intersecting sides, each side being concave with respect to the core to
11 thereby form a plurality of concave sides;

the first cladding has a substantially constant diameter in its cross-section; and

13 at least one of the concave sides has a curvature of radius greater than half the
14 diameter.

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19 (Continued on next page.)